month later, 4 underwent repeat intervention due to in-stent-restenosis (46%, 2 repeat PTCA, 2 ACB surgery).

Table	Before	After	7 wks	6 mth
syst. diam. red. (%)	68 ± 6	0	10 ± 2	38 ± 28
ref. diam. (mm)	2.5 ± 0.2	2.6 ± 0.2	2.7 ± 0.3	2.6 ± 0.3
diam. within MB (mm)	0.4 ± 0.2	2.8 ± 0.3	2.4 ± 1.2	1.6 ± 1.4
CFR (distal)	2.1 ± 0.3	3.9 ± 0.8	4.2 ± 0.7	3.1 ± 1.5

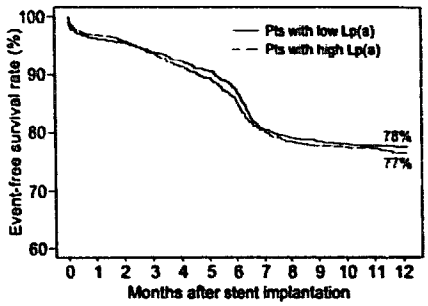
Conclusions: Stent implantation in MB completely normalizes the underlying pathophysiology including CFR. Restenosis rates, however, are relatively high and might be due to the length of the stented segments (3.5 ± 1.2 cm) and external vessel compression.

1086-87 The Influence of Lipoprotein (a) Levels on Angiographic and Clinical Outcome After Coronary Artery Stent Placement

A. Wehinger, A. Kastrati, S. Elezi, J. Pache, M. Hadamitzky, H.-J. Baum, S. Braun, A. Schömig. *1. Med. Klinik & Deutsches Herzzentrum, TU München, Germany*

Lipoprotein (a) [Lp(a)] may play a role in thrombogenesis, development of neointimal proliferation and atherogenesis. We therefore analyzed the influence of Lp(a) levels on early (30 days) and late (1 year) major adverse cardiac events (MACE) as well as on restenosis (>50% diameter stenosis). Until December '96 1991 patients (pts) with successful stent implantation had at least one measurement of Lp(a) and represent the study population. Repeat 6 month angiography was performed in 1606 (81%) pts. Pts were divided into 2 groups with high [hLp(a)] and low [lLp(a)] levels. The median value of 24 mg/dl for all pts served as cutoff point. The 2 groups did not differ with respect to baseline clinical and angiographic characteristics.

	lLp(a)	hLp(a)
lumen loss (mm)	1.1	1.1
%DS	40.5	39.9
restenosis, %	28.5	29.1



No significant difference was found between the hLp(a) and lLp(a) groups for early MACE (2.5 vs 2.9%) and stent occlusion rate (1.5 vs. 1.9%). There was in addition no significant difference in restenosis parameters at 6 months (Table). MACE-free survival at one year was also similar between the 2 groups (Graph).

It is concluded that Lp(a) levels do not influence angiographic and clinical outcome during the first year after coronary stenting.

1086-88 Clinical Outcomes of Patients With Low Left Ventricular Ejection Fraction Undergoing Intracoronary Stenting

J.F. Saucedo, J.J. Popma, R. Mehran, T. Bucher, A.S. Abizaid, M. Mastoor, G. Mintz, K.M. Kent, A. Pichard, L.F. Satler, H.S. Wu, M.B. Leon. *Washington Hospital Center, Washington, DC, USA*

Pts with low left ventricular ejection fraction (LVEF) are at high risk during PTCA and atherectomy procedures. To determine the results of stent placement in pts with low LVEF, we reviewed the acute and late clinical outcome of 1462 consecutive pts (2108 lesions) undergoing successful stenting procedures. Pts were grouped according to their LVEF: >40%, 25–40% and <25%. Compared with pts with the highest LVEF, pts in the lowest LVEF group had more prophylactic use of IABP (41.7 vs 2.1%, p = 0.001) and vein graft procedures (44.7 vs 18.5%, p = 0.001). In hospital events were infrequent and similar in the normal, low and very low LVEF groups (Death%: 0.49/1.14/0.0; QWMI%: 0.88/0.86/0.00; CABG%: 1.08/0.86/0.0 and PTCA%: 1.86/3.45/2.35, p = NS). One year clinical events are shown:

	LVEF >40% n = 1025	LVEF 25–40% n = 352	LVEF <25% n = 85	P value
Death	0.9%	2.7%	6.1%	0.001
QMI	1.1%	0.9%	2.4%	NS
CABG	6.7%	4.8%	2.4%	NS
PTCA	16.2%	18.7%	17.2%	NS
EFS	77.7%	75.4%	74.1%	NS

We conclude that pts undergoing stenting with low or very low LVEF have excellent acute outcomes and long-term event-free survival. Nevertheless, pts with LVEF <25% still have a significant increase in late mortality.

1087 New Devices

Tuesday, March 31, 1998, 9:00 a.m.–11:00 a.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: 9:00 a.m.–10:00 a.m.

1087-59 Feasibility Study of Percutaneous Transluminal Myocardial Revascularization (PTMR) With a Holmium Laser and Fiberoptic Delivery System

W. Knopf, H. Londero, U. Kaul, W. O'Neill, F.A. Shawl. *Sanatorio Allende Hospital, Argentina; Batra Hospital, India; William Beaumont Hospital, MI, Washington Adventist Hospital, MD, USA*

To determine the safety and feasibility of PTMR using the Eclipse Holmium laser (HL) and fiberoptic system, 18 pts were treated at 4 institutions using this technique. The PTMR catheter delivery system was introduced through the femoral artery and channels were made in the left ventricle (LV) from the endo-toward the epicardium. All pts had echocardiography performed prior to PTMR to assess LV wall thickness. All channel placement was guided by fluroscopy, and simultaneous transesophageal echo was used in 9 pts. Most were male (83%), with Class III (n = 4) or IV (n = 14) angina, 50% had prior MI, and 33% had CABG. Mean ejection fraction was 38 ± 12%. All 18 pts had successful procedures with no major complications, although 1 suffered a transient ischemic attack. A mean total of 13 ± 5 channels were created in target ischemic regions of the LV. Total laser time was 18 ± 8 minutes and procedure time was 53 ± 29 minutes. All pts were discharged within 48 hours of their procedure with improved anginal status to at least Class II or better.

Conclusion: PTMR using the Eclipse HL system can be safely performed with encouraging early results. Follow-up continues and long term prospective, randomized trials in the U.S. have been designed and will soon commence.

1087-60 Results of Cutting Balloon Angioplasty for Stent Restenosis. Japanese Multicenter Registry

M. Nakamura, T. Suzuki, T. Matsubara, T. Kobayashi, T. Muramatsu, Y. Asakura, W. Chin, H. Nishikawa, M. Takayama, T. Yamaguchi. *Toho University Ohashi Hospital, Tokyo, Japan*

Background: The optimal modality for stent restenosis remains unestablished. Cutting balloon angioplasty (CBA) is a strategy to reduce tissue injury and vessel stretch.

Method: To clarify the efficacy and long-term outcomes of CBA for stent restenosis, we analyzed 167 lesions treated by CBA from 9 centers. Until August 1997, clinical and angiographic follow-up has completed in 80% and 72%, respectively.

Results: Mean number of stent/lesion was 1.5 ± 0.9 (slotted tube stent 62%) and lesion length 17.2 ± 10.5 mm. CBA was 100% successful with mean balloon size of 3.25 ± 0.41 mm (CB/artery ratio of 1.20 ± 0.22), mean inflation of 3.3 ± 2.6 times, and mean inflation pressure of 8.2 ± 2.0 atm. QCA data was as follows.

	Pre	Post	F/U
Ref. Diameter (mm)	2.77 ± 0.53	2.82 ± 0.51	2.76 ± 0.52
Min. Lumen Diam. (mm)	0.85 ± 0.39	2.25 ± 0.62	1.66 ± 0.73
Diameter Stenosis (%)	70.1 ± 12.8	20.9 ± 14.8	42.6 ± 18.8

Angiographic restenosis was 29% with a mean follow-up of 142 ± 77 days and TLR rate was 22%.

Conclusion: These results suggest that CBA might be superior to our experience with balloon angioplasty for stent restenosis. Randomized study is necessary to confirm its superiority.